What is claimed is:

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- 1. A dentifrice or dentifrice phase comprising sodium bicarbonate, an anionic component reactive with sodium and water to form hydrated crystals, a water content of at least 5 wt. % based on the weight of the dentifrice, at least one of a humectant, thickener, abrasive, or other dissolved species, said dentifrice having a water activity of less than about 0.60.
- 10 2. The dentifrice or dentifrice phase of claim 1 wherein said water content is at least 7 wt. % based on the weight of the dentifrice.
 - 3. The dentifrice or dentifrice phase of claim 1 wherein said anionic species is a pyrophosphate or polyphosphate anti-tartar agent.
 - 4. The dentifrice or dentifrice phase of claim 1 wherein said anionic species is an orthophosphate, and wherein said dentifrice further includes a water-soluble or partially water-soluble calcium salt kept separate from said orthophosphate.

- 5. The dentifrice or dentifrice phase of claim 1 wherein said sodium bicarbonate is present in amounts of from about 7 to 65 % by weight of the formulation.
- 5 6. The dentifrice or dentifrice phase of claim 1 including a humectant in amounts of at least 10 weight % relative to the weight of the dentifrice.
 - 7. The dentifrice or dentifrice phase of claim 6 further including a thickener in amounts of from about 0.1 to 10 weight %.

- 8. The dentifrice or dentifrice phase of claim 1 further including a fluoride salt.
- 9. The dentifrice or dentifrice phase of claim 7 comprising at least 7weight % of water.
 - 10. The dentifrice or dentifrice phase of claim 9 further including a fluoride salt.
- 20 11. The dentifrice or dentifrice phase of claim 1 further including a surfactant.

- 12. The dentifrice or dentifrice phase of claim 1 in the form of a toothpaste.
- 13. The dentifrice or dentifrice phase of claim 1 in the form of a dental cream or gel.

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- 14. The dentifrice or dentifrice phase of claim 3 wherein said pyrophosphate is a mono, di, tri, or tetra-alkali metal pyrophosphate.
- 15. The dentifrice or dentifrice phase of claim 4 wherein said orthophosphate includes the alkali metal and ammonium salts of orthophosphoric acid.
 - 16. The dentifrice or dentifrice phase of claim 3 wherein said pyrophosphate salt is present in amounts of from about 1.5 to 15% by weight of the formulation.
 - 17. The dentifrice or dentifrice phase of claim 3 wherein said sodium bicarbonate is present in amounts of from about 7 to 65 % by weight of the formulation.

- 18. The dentifrice or dentifrice phase of claim 4 wherein said sodium bicarbonate is present in amounts of from about 7 to 65 % by weight of the formulation.
- 5 19. The dentifrice or dentifrice phase of claim 17 including a humectant in amounts of at least 10 weight % relative to the weight of the dentifrice.
 - 20. The dentifrice or dentifrice phase of claim 18 including a humectant in amounts of at least 10 weight % relative to the weight of the dentifrice.
 - 21. The dentifrice or dentifrice phase of claim 19 further including a thickener in amounts of from about 0.1 to 10 weight %.
- The dentifrice or dentifrice phase of claim 20 further including a thickener in amounts of from about 0.1 to 10 weight %.